

## Method and Apparatus for Optimized Image Processing

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### Abstract of the Disclosure

An image processing system for digital printing for improving throughput and efficiency of the transfer of image data to imaging devices, such as lasers, while allowing  
5 for dynamic and continuous adjustment of image size and registration (i.e., alignment) on recording media. A buffer memory structure is configured to receive data from raw image files. Specific portions of data are copied from the raw image files into a buffer memory structure and, for compilation of the final image, into an image buffer. Image overlap is resolved by copying data into the image buffer according to a defined  
10 hierarchy. Using a phase locked loop, image size and registration are adjusted to optimize the appearance of the final image on the recording medium. The optimization is performed dynamically and continuously, thereby providing a uniform final image. Many aspects of the operation of the image processing system may be under the control of a digital computer.

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